REMARKS

In view of the foregoing amendments and following remarks responsive to the Office Action of December 5, 2001, Applicants respectfully request favorable reconsideration of this application.

Claim Amendments to Improve Form

As a preliminary matter, Applicant has reviewed the claims and has made amendments throughout in order to improve their form. The majority of changes relate to the addition of the word "further" before the word "comprising" and changing the word "records" in the claims to the word "data". The addition of the word "further" is strictly grammatical. The change of the word "records" to "data" is made to make the claim terminology correspond better with the specification terminology. Particularly, the specification uses the word "record" only in connection with the largest data structure in the pronunciation databases 30, whereas the claims were using the term more generically to refer to several different data structures referred to in the specification. See, page 5, line 20 et seq. In order to avoid any potential perceived inconsistency with the specification, Applicant has herein replaced the word "record" with the more generic term "data".

The changes to claims 11 and 12 improve their form. Applicant has amended claim 14 to correct a typographical error in that claim 14 was intended to depend from claim 13, rather than claim 1. The preambles of dependent claims 16 through 22 have been corrected to correspond to the independent claim 15, from which they depend. Particularly, independent claim 15 is an article of manufacture claim. Accordingly,

independent claims 16-21 should not refer to a method, but to an article. Claims 1 and 15 have been amended to expressly recite what was previously merely implicit. Specifically, these claism nopw expressly recite that the various "possible pronunciations" are "different" pronunciations. Most, if not all, other changes, are grammatical, clerical or typographical in nature and should be self-explanatory.

Response to Office Action

Turning now to the December 5, 2001 Office Action, the Office rejected all pending claims, claims 1-23, under 35 U.S.C §102(b) as being anticipated by Blackmer.

The Present Invention

The present invention is a method and apparatus for teaching a speech recognition system or a text-to-speech system the proper pronunciations of letters or letter groups within particular character strings, such as words or names (hereinafter strings). Specifically, the particular pronunciation of a letter or letter group (hereinafter letter group) in any given character string can depend on many different factors, including the particular language, the particular word within which it appears, the particular usage of that word (e.g., noun or verb), the particular speaker, etc. The present invention involves a scheme by which a user can enter a string using a graphical user interface (hereinafter GUI) and then teach the system (e.g., the software) how to pronounce various letter groups in the string. More particularly, the user selects a particular letter group and the software GUI presents the user with a plurality of words containing that letter group. The user can then select the word in the list in which the pronunciation of that letter group most closely matches the correct or

desired pronunciation of that letter group in the string. The system also provides similar GUI for allowing the user to change syllable breaks and/or accent within the string.

The Blackmer Reference

The Blackmer reference does not have anything to do with teaching software the pronunciation of letter groups or words. Rather, Blackmer pertains to <u>software</u> for teaching <u>a person</u> the correct pronunciation of words in a given language. <u>The entire disclosure of Blackmer is based on the premise that the computer already knows how to pronounce the words</u>. Blackmer discloses a lesson plan and method for teaching <u>people</u> correct pronunciation, not for teaching the <u>software</u> correct pronunciation. In short, it is directed to an entirely different issue than the present invention and is, therefore, essentially irrelevant to the present invention.

The Independent Claims Distinguish Over Blackmer

The Office's explanations of the correspondence of the elements of the claims of the present application to the disclosure of Blackmer are entirely erroneous. For instance, with respect to the step in claim 1 of "allowing the user to select one or more characters in the string and retrieve from a database a plurality of syllables, words or parts of words representing different possible pronunciations of the selected one or more characters and displaying the retrieved samples", the Office refers to column 19, lines 1-34 of Blackmer. However, column 19, lines 1-34 describe how to navigate through various GUIs of a lesson on the difference in pronunciation between the letters "p" and "b". It mentions that icons 644 and 646 lead to lessons on pronouncing "p" and

"b", respectively. However, it does not describe the lessons. Even looking further down column 19, it merely discloses that the computer shows a plurality of words to the trainee that will help him or her understand the correct pronunciation of those letters (see Fig. 6C) and then plays a recording of those words being pronounced. There is no mention in Blackmer of different possible pronunciations of the letters "p" or "b". In fact, the point of Blackmer is that "p" is pronounced the same way in all of the displayed words with that letter and "b" is pronounced the same in all of the displayed words with that letter. There is no "retriev[ing] a plurality of syllables ... representing different possible pronunciations." Furthermore, Blackmer does not disclose"storing first pronunciation data comprising the string of characters with the selected one or more characters being assigned the pronunciation associated with the sample selected by the user".

As noted above, the pronunciation of the words shown in the GUI represented in Fig. 6C of Blackmer is given by the software to the user, not by the user to the software. Independent claim 15 includes essentially identical limitations. Accordingly, these claims and all claims that depend therefrom, i.e., claims 1-21, clearly patentably distinguish over Blackmer.

The Dependent Claims Add Further Distinguishing Limitations

The dependent claims contain even further distinguishing features. For instance, claim 2 adds "generating a pronunciation of the letter group using the pronunciation represented by the sample selected by the user as a pronunciation for the selected one or more characters, and audibly outputting the generated

pronunciation". Blackmer obviously cannot meet this limitation since there is no pronunciation that is "selected by the user".

Claim 4 adds the step of "allowing the user to select a second of the displayed samples in storing second pronunciation data comprising the string of characters with the selected one or more characters being assigned a pronunciation represented by the second sample selected by the user". This is a similar step to the above-discussed step in claim 1. Claim 5 depends from claim 4 and adds the step of, during a text-to-speech process of generating audible output of a text file containing a string of characters, selecting one of the first or second pronunciation data. Obviously, since Blackmer does not discuss how the computer selects pronunciation of the words, it cannot possibly disclose this feature.

Claim 6 depends from claim 5 and further adds the limitation of "associating the first and second pronunciation data with first and second objects, respectively, and selecting one of the first and second objects, and during the step of selecting one of the first and second pronunciation data comprises selecting the pronunciation data associated with the selected object". This claim builds on the feature recited in claims 4 and 5 where a letter group in a single word may have a different pronunciation depending on context (i.e., the object). Blackmer does not disclose anything like this since it does not disclose anything about how the software determines the pronunciation.

Claims 7 and 8 continue to build on this concept. Claim 7 recites that the particular pronunciation selected by the software is selected based on the pronunciation of the particular user as determined during a speech recognition process.

Claim 8 is very similar to claim 6 except depending from claim 7. None of this is taught in Blackmer, which does not disclose how the software selects a pronunciation.

Claim 9 pertains to the feature discussed on page 8, line 15-18 of the specification of allowing the user to alter the syllable breakdown of a word from the default breakdown provided by the computer. The Office asserted that this is taught in column 22, lines 20-25 of Blackmer. However, that portion of the specification merely notes that the plurality of words shown in the GUI represented by Fig. 9C have "a like number of syllables, and, furthermore, the same syllable in each of the words is stressed". This is utterly irrelevant to what is claimed in claim 9.

Claim 10 recites "allowing the user to identify a part of the character string to associate with an accent, and wherein the step of storing said first pronunciation data comprises storing data representing the identified accent". Claim 10 recites the feature disclosed on page 8, line 19 through page 9, line 6 of the specification wherein the user can change the syllabic accentuation in the word as desired. The Office asserted that this is disclosed in Blackmer in column 22, lines 18-31 (the same portion referred to in connection with claim 9 discussed immediately above). However, as noted above in connection with claim 9, this portion of Blackmer has nothing to do with teaching the computer how to pronounce the word, but instead relates to the computer teaching the user how to pronounce the word.

Claims 16, 17, 18, 19, 20 and 21 depend directly or indirectly from claim 15 and contain limitations similar to those discussed above in connection with dependent claims 2, 3, 4, 5, 6, and 7, respectively. Hence, claims 16, 17, 18, 19, 20 and 21 further
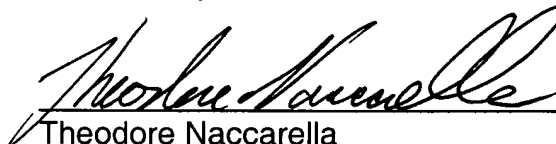
distinguish over the prior art for the reasons discussed with respect to claims 2, 3, 4, 5, 6, and 7.

Conclusion

In view of the foregoing amendments and remarks, this application is now in condition for allowance. Applicant respectfully requests the Office to issue a Notice of Allowance at the earliest possible date. The Examiner is invited to contact Applicant's undersigned counsel by telephone call in order to further the prosecution of this case in any way.

Respectfully submitted,

Dated: 3.11.03

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Version With Markings to Show Changes Made

In the Claims:

1.   (Amended)   A method implemented on a computer for allowing a user to set a pronunciation of a string of characters, the method comprising:

allowing the user to select one or more characters in the string;

retrieving from a database accessible by the computer a plurality of samples of words or parts representing <u>different</u> possible pronunciations of the selected one or more characters and displaying the retrieved samples;

allowing the user to select one of the displayed samples; and

storing [a] first pronunciation [record] <u>data</u> comprising the string of characters with the selected one or more characters being assigned the pronunciation associated with the sample selected by the user.

2.   (Amended)   The method of claim 1 <u>further</u> comprising generating a pronunciation of the character string using the pronunciation represented by the sample selected by the user as the pronunciation for the selected one or more characters, and audibly outputting the generated pronunciation.

3.   (Amended)   The method of claim 2, <u>further</u> comprising allowing the user to select another of the displayed samples after audibly outputting the generated pronunciation.

4.   (Amended)   The method of claim 1, <u>further</u> comprising allowing the user to select a second of the displayed samples and storing [a] second pronunciation [record] <u>data</u> comprising the string of characters with the selected one or more

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characters being assigned the pronunciation represented by the second sample selected by the user.

5.   (Amended)   The method of claim 4, _further_ comprising, during at text-to-speech process of generating audible output of a text file containing the string of characters, selecting one of the first and second pronunciation [records] _data_.

6.   (Amended)   The method of claim 5, _further_ comprising associating the first and second pronunciation [files] _data_ with first and second objects, respectively, and selecting one of the first and second objects, and wherein the step of selecting one of the first and second pronunciation [records] _data_ comprises [selected] _selecting_ the. pronunciation [record] _data_ associated with the selected object.

7.   (Amended)   The method of claim 4, _further_ comprising, during a speech recognition process, recognizing a pronunciation of the string of characters by a user and selecting one of the first and second pronunciation [records] _data_ which most closely matches the recognized pronunciation.

8.   (Amended)   The method of claim 7, _further_ comprising associating the first and second pronunciation [files] _data_ with first and second objects, respectively, and selecting one of the first and second objects which is associated with the selected pronunciation [record] _data_.

9.   (Amended)   The method of claim 1, _further_ comprising allowing the user to identify a part of the character string as a separate syllable, and wherein the step of

storing the first pronunciation [record] <u>data</u> comprises storing data representing the identified separate syllable.

10.   (Amended)   The method of claim 1, <u>further</u> comprising allowing the user to identify a part of the character string to associate with an accent, and wherein the step of storing the first pronunciation [record] <u>data</u> comprises storing data representing the identified accent.

11.   (Amended)   The method of claim 1, <u>wherein said character string is received</u> [comprising receiving the character string] as input [by] <u>from</u> the user.

12.   (Amended)   The method of claim 1, <u>wherein said character string is selected by</u> [comprising allowing] the user [to select the character string] from a dictionary database accessible to the computer.

13.   (Amended)   The method of claim 1, <u>further</u> comprising allowing the user to select a preferred language and wherein the step of retrieving the samples representing possible pronunciations of the selected one or more characters comprises selecting a database for the preferred language from a plurality of language databases and retrieving the samples from the selected database.

14.   (Amended)   The method of claim [1] <u>13,</u> <u>further</u> comprising allowing the user to select a second language for the selected one or more characters and retrieving additional word samples from a second database corresponding to the selected second language.

15.   (Amended)   An articles of manufacture comprising a computer readable medium storing program code for, when executed, causing a computer to perform a graphical user interface method for allowing a user to set a pronunciation of a string of characters, the method comprising:

allowing the user to select one or more characters in the string;

retrieving from a database accessible by the computer a plurality of samples of words or parts of words representing different possible pronunciations of the selected one or more characters and displaying the retrieved samples;

allowing the user to select one or the displayed samples; and

storing [a] first pronunciation [record] data comprising the string of characters with the selected one or more characters being assigned the pronunciation associated with the sample selected by the user.

16.   (Amended)   The article of claim 15, wherein [the method] the program code further causes the computer to [perform comprises generating] generate a pronunciation of the character string using the pronunciation represented by the sample selected by the user as the pronunciation for the selected one or more characters, and audibly [outputting] output the generated pronunciation.

17.   (Amended)   The [method] article of claim 16, wherein [the method] the program code further causes the computer to [perform comprises allowing] allow the user to select another of the displayed samples after audibly outputting the generated pronunciation.

18.   (Amended)   The [method] article of claim 15, wherein [the method] the program code further causes the computer to [perform comprises allowing] allow the

user to select a second of the displayed samples and storing [a] second pronunciation [record] data comprising the string of characters with the selected one or more characters being assigned the pronunciation represented by the second sample selected by the user.

19.   (Amended)   The [method] article of claim 18, wherein [the method] the program code further causes the computer [to perform comprises], during a text-to-speech process of generating audible output of a text file containing the string of characters, [selecting] to select one of the first and second pronunciation [records] data.

20.   (Amended)   The [method] article of claim 19, wherein [the method] the program code further causes the computer to [perform comprises associating] associate the first and second pronunciation [files] data with first and second objects, respectively, and [selecting] select one of the first and second objects, and wherein the step of selecting one of the first and second pronunciation [records] data comprises [selected] selecting the pronunciation [record] data associated with the selected object.

21.   (Amended)   The [method] articles of claims 18, wherein [the method] the program code further causes the computer [to perform comprises], during a speech recognition process, [recognizing] to recognize a pronunciation of the string of characters by a user and [selecting] select one of the first and second pronunciation [records] data which most closely matches the recognized pronunciation.

22.   (Amended)   The [method] article of claim 21, wherein [the method] the program code further causes the computer to [perform comprises associating]

associate the first and second pronunciation files with first and second objects,
respectively, and [selecting] select one of the first and second objects which is
associated with the selected pronunciation record.

    23.   (Amended)   A graphical user interface system for allowing a user to
modify a pronunciation of a string of characters, the system comprising:

        a dictionary database stored on a memory device comprising a plurality of
first character strings and associated pronunciation records;

        a pronunciation database stored on a memory device comprising a
plurality of second character strings each comprising one or more characters and each
associated with a plurality of words, each word having one or more characters which
are pronounced in the word in substantially identical fashion to one manner in which
the associated second character string may be pronounced;

        an input/output system for allowing a user to select one of the first
character strings from the dictionary database, to select one or more characters from
the selected string, and to select one of the words in the pronunciation database; and

        a programmable controller for generating [a] pronunciation [record] data
comprising the selected first character string with the selected one or more characters
being assigned the pronunciation associated with the word [sample] selected from the
pronunciation database by the user.